FHWA REGION NO	STATE	FED. AID PROJ. NO	SHEET NO.	TO SH
3	MD.	SEE TITLE SHEET		

Intersection Operation

The existing cabinet and controller are to be utilized. The phasing is to be modified to a NEMA five phase, semi-traffic-actuated mode. There will be an exclusive/permissive U-turn for the northbound movement of MD 355 included. The through movements for MD 355 will operate concurrently and have concurrent pedestrian phases across the east and west legs of the intersection. The Watkins Mill Road movements will operate alone and have an actuated pedestrian phase across the north leg of the intersection.

Construction Details

A. Use existing handhole.

B. Install 1 in. liquid tight, non-metallic conduit for loop detector sleeve.

C. Install 6 ft. x 30 ft. quadrupole type vehicle loop detector (2-4-2 turns).

D. Install 6 ft. x 6 ft. vehicle loop detector (3 turns).

E. Use existing conduit.

F. Use existing strain pole. Install pedestrian signal head and signs as shown.

G. Use existing strain pole. Install pedestrian signal head, pedestrian pushbutton, and signs as shown.

H. Use existing span wire. Install signs as shown.

J. Use existing span wire, relocate existing signal heads, and sign. Install signal heads and signs as shown.

K. Install 12 in. preformed white pavement marking for pedestrian crossing.

L. Install 24 in. preformed white pavement marking for stop line.

M. Existing cabinet/controller are to be utilized.

N. Use existing handhole and splice new loopwire to existing 2-conductor aluminum shielded cable.

O. Use existing loop detector sleeve.

Equipment List "A"

Equipment to be supplied by the SHA.

Quantity	Unit	Description
2	EA	12 in., two-way, two section (Symbolic WK, DW) adjustable pedestrian signal head - pole mount.
2	EA	12 in., one-way, two section (Symbolic WK, DW) adjustable pedestrian signal head - pole mount.
2	EA	Pedestrian pushbutton assembly.
1	EA	8 in./12 in., one-way, five section (8 in. R,Y,G / 12 in. YA,GA) adjustable traffic signal head - span wire mount.
1	EA	12 in., one-way, five section (R,Y,YA,G,GA) adjustable traffic signal head - span wire mount.
121	SF	Sheet aluminum signing. [To consist of six 9 in. x 12 in. R10-3C and two 60 in. x 51 in. shield assembly signs for pole mounting, and six 16 in. x Var. D3-2, one 30 in. x 36 in. R3-5(U), and one 36 in. x 42 in. R10-12(U) signs for span wire mounting.]

Equipment List "B"

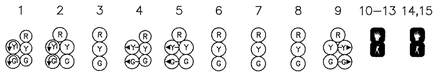
Equipment to be furnished and/or installed by the Contractor.

Quantity	Unit	Description
950	LF	12 in. preformed white pavement marking for pedestrian crossing.
100	LF	24 in. preformed white pavement marking for stop line.
600	LF	Sawcut for signal loop detector.
1650	LF	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
75	LF	1 in. liquid tight, flexible, non-metallic conduit for loop detector sleeve.
1525	LF	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
3	EA	Relocate existing traffic signal head - span wire mount.
1	EA	Loop detector splice.
10.5	SF	Relocate existing sheet aluminum signing - overhead mount.
74	SF	Install sheet aluminum signing - overhead mount.
47	SF	Install sheet aluminum signing - pole mount.
6	EA	Install pedestrian signal head - pole mount.
2	EA	Install pedestrian pushbutton.
200	LF	2-conductor electrical cable (No. 14 A.W.G.).
275	LF	3-conductor electrical cable (No. 14 A.W.G.).
650	LF	5-conductor electrical cable (No. 14 A.W.G.)
LS	LS	Removal of existing traffic signal equipment.

Equipment List "C"

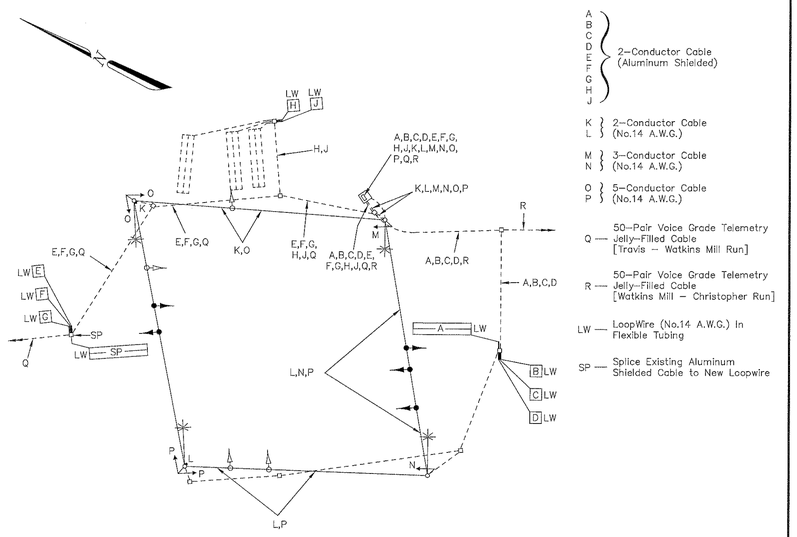
Equipment to be removed by the contractor and delivered to the MCDOT Systems Technical Center, 1283 Seven Locks Road, Building "C", Rockville, MD. 20852. A twenty-four (24) hour notice is required prior to delivery. Contact Mr. Emil Wolanin at (301) 217-2208.

Quantity	Unit	Description
2	EA	Traffic signal head.



	1	2	3	4	5	6	7	8	9	10-13	14,15	
Phase 1 & 5	R ←G—	R ←G—	R	R ←G—	R ←G—	R	R	R	R →G—	DW	DW	
1 & 5 Change To Phase 1 & 6 or Phase 2 & 5												
Phase 1 & 6	G ←G—	G ←G—	G	R	R	R	R	R	R	DW	DW	
1 Change	G ←Y—	G ←Y—	G	R	R	R	R	R	R	DW	DW	
Phase 2 & 5	R	R	R	G ←G—	G ←G—	G	R	R	R →G	DW	DW	
5 Change	R	R	R	G ←Y—	G ←Y—	G	R	R	R →Y	DW	DW	
Phase 2 & 6	G	G	G	G	G	G	R	R	R	WK	DW	
Ped Clearance	G	G	G	G	G	G	R	R	R	FL/DW	DW	
2 & 6 Change	Y	Y	Y	Y	Y	Y	R	R	R	DW	DW	
Phase 4	R	R	R	R	R	R	G	G	G	DW	DW	
4 Change	R	R	R	R	R	R	Y	Y	Y	DW	DW	
Phase Alt. 4	R	R	R	R	R	R	G	G	G	DW	WK	
Ped Clearance	R	R	R	R	R	R	G	G	G	DW	FL/DW	
Alt. 4 Change	R	R	R	R	R	R	Y	Y	Y	DW	DW	
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK	

Phase Chart



Wiring Diagram

Ultimate Traffic Control Signal

Sheet 32 of 5

Revision 'A'

A/E GROUP, INC.
CONSULTING ENGINEERS • PLANNERS
11409 CRONHILL DRIVE
OWINGS MILLS, MD. 21117
(410) 363-1908
A/E JOB NO: 94-284

REVISIONS	APPROVALS
(A) November 6, 1995 Rebuild to new geometrics. S.H.A. No. M 611-501-371	CHIEF, SIGNAL DESIGN SECTION
	ASST. DISTRICT ENGINEER, TRAFFIC
	CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION
	DIRECTOR, OFFICE OF TRAFFIC & SAFETY

ORIGINAL ON FILE

MDOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION SIGNAL # 15035516.16

DRAWN BY: W. Richardson
DES. BY: W. Richardson
CHK. BY: S. Renzi

MD 355 at Watkins Mill Road

COUNTY: MONTGOMERY

DATE: March, 1985 F.A.P. NO. N/A
SCALE: N/A S.H.A. NO. 855-25006

TS/STD. NO. **2083A-GI**

SHEET NO. ____ OF ____